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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DIAZ, THOMAS C

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MAIL DATE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/501,821	Applicant(s) HEATHCOTE ET AL.	
	Examiner THOMAS DIAZ	Art Unit 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Remarks

This office action is in response to the reply filed on 08/25/2008. The examiner appreciates and acknowledges applicant's response.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okubo et al. (US patent 4608877) in view of Meyers et al. (US patent 4892001).**

Regarding claim 1,

Applicant claims a gear shift mechanism (fig.1 and abstract) with:

- A shift rail selector element comprising two tongues where the tongues are spaced apart a fixed distance. This corresponds to Okubo et al.'s shift fingers (fig.1, 12 and 13).
- A first and second shift rails which are connected to shift forks and both having interlocking elements. This corresponds to Okubo et al.'s shift rails (fig.1, 1 and 3), connected to shift forks (fig.1, 6) and (fig.2, 6'), and also having connecting members (fig.1, 5b, and 5).

Okubo et al. fails to disclose wherein each of the first shift and the second shift rail include a flat side, and a trough-like depression extending through the flat side thereby defining a reduced wall area, and wherein each reduced wall area includes an aperture formed therein for use as an interlocking element.

Meyers et al. teaches the use of shift rails (fig.3, 26,28) which include a flat side (see fig.3, flat side of 32 or 33), and a trough-like depression (fig.3, depression formed on element 33 and 32) extending through the flat side thereby defining a reduced wall area (fig.3), and wherein each reduced wall area includes an aperture (fig.3, 33a and 32a) formed therein. Meyers et al. teaches the use of this shifting mechanism for the purpose of providing an improved interlock assembly for preventing more than one of a plurality of shift bars from being selected at a given time (col.1, lines 6-11).

Please note that the shift rails taught by Meyers et al. are composed of three parts, (i.e. rail 28 includes 36 and 33 and 26 includes 35 and 32). The reduced wall area is formed on rails (28 and 26) since the depressions formed on parts (32 and 33) do not extend past the middle parts (35 and 36) of the shift rails.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the shift rails disclosed by Okubo et al. to include a flat side, and a trough-like depression extending through the

flat side thereby defining a reduced wall area, and wherein each reduced wall area includes an aperture formed therein, as taught by Meyers et al. for the purpose of providing an improved interlock assembly for preventing more than one of a plurality of shift bars from being selected at a given time (col.1, lines 6-11).

Regarding claim 2,

Applicant claims a third shift rail connected to another shift fork and having an interlocking element, which corresponds to the shift rail (fig.1, 4) and shift fork (fig.3, 6a) and connecting member (fig.1, 5d), disclosed by Okubo et al.

Regarding claims 3 and 4,

Applicant claims the gear shifting mechanism having two groups of shift rails where each group has two shift rails which corresponds to the two groups (fig.1, 1 and 2) and (fig.1, 3 and 4) presented by Okubo et al.

Regarding claim 5,

Applicant claims that the shift rails have engagement regions which correspond to the regions where the shift rails in Okubo et al. figure 1 connect to the connecting members in figure 1.

Regarding claim 6,

Applicant claims that the distance between the tongues are greater than the distance between two adjacent interlocking member which Okubo et al. discloses as depicted in figure 1. The distance between shift rails 1 and 2 is less than the distance between tongues 12 and 13.

Regarding claim 7,

Applicant claims that the distance between the selector tongues is smaller than the distance between two spaced apart interlocking elements which corresponds to the relationship of distances between the tongues and connecting members 5a and 5c disclosed in Okubo et al. figure 1.

Regarding claim 8,

Applicant claims a plurality of shift rails grouped in pairs and being spaced apart and where the selector tongues are each associated with one of the pairs of shift rails. This corresponds to Okubo et al.'s figure 1 and col.2, lines 61-66.

Regarding claim 9,

Applicant claims that the selector element is capable of moving in a direction traversing the shift rails and in a direction parallel to the shift rails. This corresponds to the movement of shift bar (fig.1, 7) which moves the tongues transversely to the shift rails and also can rotate which allows the tongues to move longitudinally to the shift rails (see abstract of Okubo et al.).

Regarding claim 10,

Applicant claims that all the interlocking elements have a width which is less than the width of the respective shift rail measured in the same directions. Okubo et al. discloses this through figure 1, where as seen the width of the connecting members is less than the width of rails.

Regarding claim 11,

Applicant claims that the width of the interlocking elements is approximately half the width of the respective shift rail measured in the same direction. This is also depicted in figure 1 of Okubo et al. in particular where connecting member 5b is approximately half the width of rail 1.

Regarding claim 12,

Applicant claims that the width of the tongues essentially correspond to the width of the interlocking elements which corresponds figure 1 of Okubo et al. where the width of the tongues (fig.1, 12 and 13) essentially correspond to the width of the connecting members 5, 5a-d).

Regarding claim 13,

Applicant claims the selector element having a blocking element which blocks the shift rails when the tongues are at least in partial engagement with the shift rails. This corresponds to what is blocking members (fig.1, 14 and 14') which block the shift rails from being moved when a tongue is at least in partial engagement with the shift rails (col. 3, lines 17-20), disclosed by Okubo et al.

Regarding claim 14,

Applicant claims that the blocking element only releases one of the shift rails for engagement and movement. This is also disclosed by Okubo et al. in col.3, lines 17-20.

Regarding claim 15 and 19,

Okubo et al. discloses that the blocking element is arranged on a support (fig.1, 7) which is seated displaceably in the first direction and in this direction is connected with the shift rail selector element (fig.1, 12 and 13; These elements are rotatable.), wherein the shift rail selector element is freely movable relative to the support in the second direction.

Regarding claim 16,

Okubo et al. discloses that the shift rail selector element is resiliently biased towards its center position by means of at least one spring element (fig.1, 22; biases the selector elements in the first direction.) at least in the first direction, in which its selector tongues are not in engagement with the interlocking elements of the shift rails, or in which its selector tongues are in engagement with the interlocking element of a selected shift rail.

Regarding claim 18,

Okubo et al. discloses that the shift rail selector element (fig.1, 12 and 13) is seated, movable in the second direction, on a support (fig.1, 7; can move in the first direction), which in turn is seated, displaceable in the first direction, in a housing (see fig.1, the bar is seated in a housing), wherein the shift rail selector element has a means for a connection with a known selector finger (fig.1, the shift rail selector element is connected to the selector finger 10, through element 11).

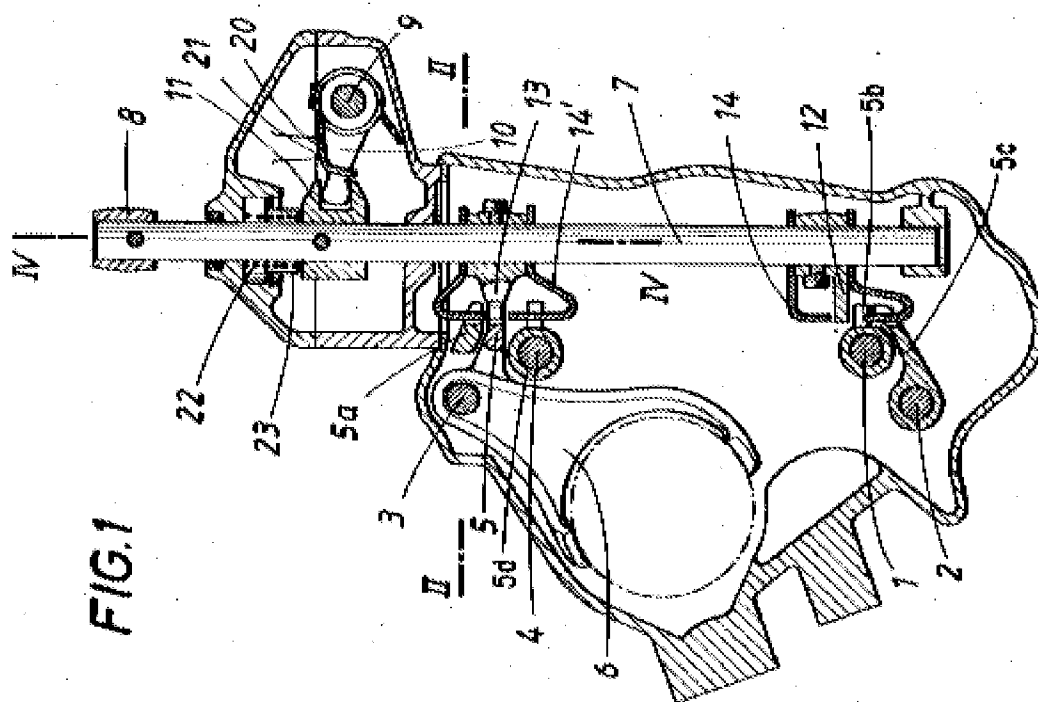


Figure i- Okubo et al.'s figure.

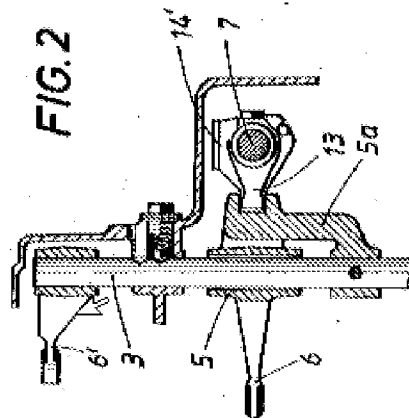


Figure ii- Okubo et al.'s figure.

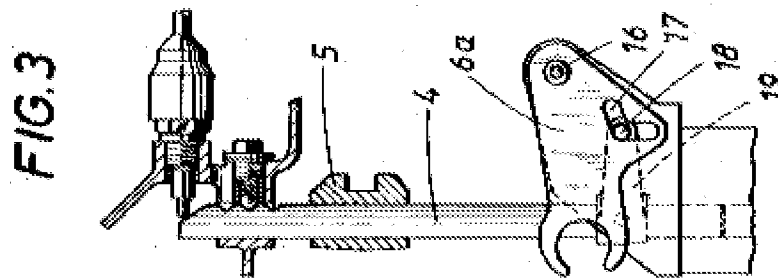


Figure iii- Okubo et al.'s figure.

Regarding claim 17,

Okubo et al. fails to disclose a support having an extension in the first direction which supports a pressure spring supported between two driver plates, which are stretched between detents formed on the extension, where two stationary contact faces are assigned to the pressure spring.

Meyers et al. teaches a support (fig.3, 50) which has an extension or shaft (fig. 3, 68) which supports a spring (fig.3, 67 and 72) which is supported between the driver plates (fig.3, 71 and 66), and stretched between detents (fig.3, 70) formed on the shaft and where two stationary contact faces (fig.3, 70 and 71), for

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purpose of providing an improved interlock assembly for a vehicle transmission (col.1, lines 6-11) and also for providing the operator with tactile feedback allowing for the operator to be able to feel what shift bar or rail has been selected (col.2, lines 48-54):

Examiner notes, the contact faces 70 and 71 are stationary when the shift lever is in a centered and neutral position or at equilibrium.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Okubo et al. to include a support (fig.3, 50) which has an extension or shaft (fig. 3, 68) which supports a spring (fig.3, 67 and 72) which is supported between the driver plates (fig.3, 71 and 66), and stretched between detents (fig.3, 70) formed on the shaft and where two stationary contact faces (fig.3, 70 and 71), as taught by Meyers, et al., for the purpose of providing the operator with tactile feedback allowing for the operator to be able to feel what shift bar or rail has been selected (col.2, lines 48-54), and for providing an improved interlock assembly for a vehicle transmission (col.1, lines 6-11).

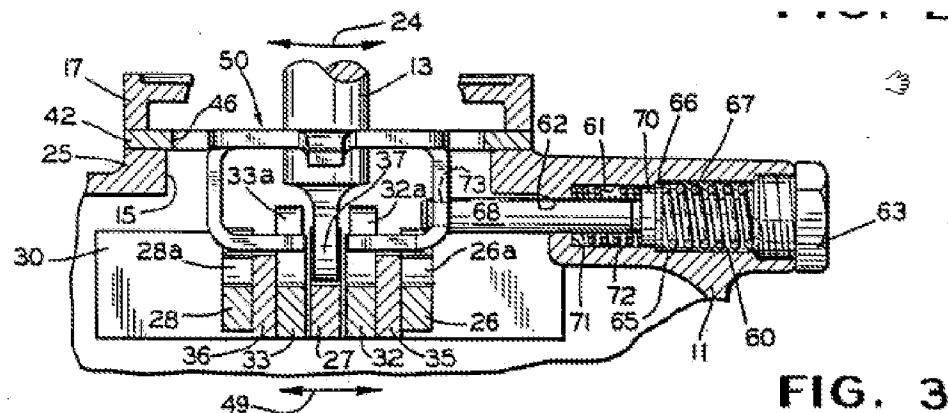


Figure iv- Meyers et al. figure.

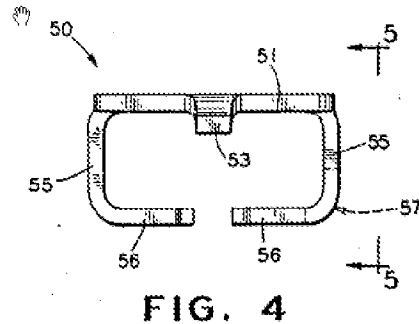


Figure v- Meyers et al. figure.

Response to Arguments

Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection. It is noted that the applicant alleges that the reference Meyers et al. does not teach or suggest the newly added amendments to claim 1. However, Meyers et al. indeed teaches on the newly added claim limitations, as set forth above in the above rejection.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please also note the shift rails presented by patents (6234038, 5408898, 5468197).

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS DIAZ whose telephone number is (571)270-5461. The examiner can normally be reached on Monday-Friday 8:30am to 5:30pm, First Friday's off..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571)272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Thomas Diaz/
Examiner, Art Unit 3656

/Richard WL Ridley/
Supervisory Patent Examiner, Art Unit 3656